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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,352	01/28/2005	Kazuo Mizuno	4041J-919/NP	8349
27572	7590	08/30/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			NGUYEN, HAI L	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2816	

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/523,352	Applicant(s) MIZUNO ET AL.	
	Examiner Hai L. Nguyen	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-15 is/are pending in the application.
 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 10-15 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/01/06; 01/03/06; and 01/28/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Election

1. Applicant's affirmation of the election received on 8/09/2006 is acknowledged.
However, this application still contains non-elected claims 8 and 9. Therefore, a complete reply to this Office Action must include cancellation of those non-elected claims.

Drawings

2. Figures 11A and 11B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 5 and 11 are objected to because of the following informalities: lines 5-6, "the said" should be changed to --said--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murtojarvi (US 6,668,162) in view of Carroll (US 5,130,571).

With regard to claim 1, Murtojarvi discloses in Fig. 4C a circuit comprising a device (D3C) working as a diode; a first high resistance device (R12) connected to an anode side of the diode; and a high resistance device (R13) inserted between a cathode side of the diode and ground. The circuit of Murtojarvi meets all the claimed limitations except for disclosing the resistors instead of transistors, for working as a high resistance by a positive potential being applied thereto, as recited in the claim. Carroll teaches in Figs. 1-2 a circuit having a transistor M1 in place of a resistor, for working as a high resistance by a positive potential being applied thereto. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the resistors in the circuit of the prior art with the transistors taught by Carroll for the advantage of being able to fabricate all components in a single integrated circuit and low the manufacturing cost.

With regard to claim 2, the circuit further comprises a resonance circuit (R13, C12) connected between the cathode side of the diode and ground for shorting with the high frequency power of a specified frequency.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murtojarvi in view of Carroll, as applied to claim 1 above, and further in view of Carlton et al. (US 4,253,057).

The above discussed circuit of the references meets all the claimed limitations except for a matching circuit (i.e., MC in instant Fig. 1) provided on the anode side of the diode for

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obtaining matching with respect to an inputted high frequency power. Carroll teaches in Fig. 1 a circuit comprising a matching circuit (14) for obtaining matching with respect to an inputted frequency. It would have been obvious to one of ordinary skill in the art at the time of invention to implement the matching circuit in the circuit of the references in order to provide best frequency response so that an input signal is not distorted because of impedance mismatch.

Allowable Subject Matter

7. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 3 and 10-15 are allowed.

The prior art of record fails to disclose or fairly suggest a start signal outputting circuit (12 in instant Fig. 2) having an RF/DC converting circuit for converting a high frequency power (RF) into a direct current potential (DC) and outputting it, as recited in claim 3, having a very specific structural limitation such as a first NPN transistor (Q1) having its emitter connected to an anode side of the diode (QD) and its base and collector to which a predetermined positive potential is applied; a second NPN transistor (Q2) having its collector connected to a cathode side of the diode and its emitter connected to ground via a resistance (R'2); a third NPN transistor (Q3) having its emitter connected to a base of the second NPN transistor and its base and collector to which a predetermined positive voltage is applied; and a resonance circuit (L1, C1, C2) connected between the cathode side of the diode and ground for shorting a specified

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frequency, and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

The prior art of record fails to disclose or fairly suggest a start signal outputting circuit (150 in instant Fig. 4) having an RF/DC converting circuit for converting a high frequency power (RF) into a direct current potential (DC) and outputting it, as recited in claim 5, having a very specific structural limitation such as a counterpart circuit (QDD, QD1, QD2, QD3, RD1, RD2, RD3) of the same construction as the RF/DC converting circuit (QRD, QR1, QR2, QR3, RR1, RR2, RR3), of which an anode of a device working as a diode is provided with a d.c. potential based on the positive potential given to the RF/DC converting circuit, so that a differential RF/DC converting part is formed by the RF/DC converting circuit and the counterpart circuit, and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith (US 4,496,858) is cited as of interest because it discloses a frequency to voltage converter.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN 
August 19, 2006


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800